

Response to December 7, 2005, Comments
from the County of Riverside on Anza
Sanitary Landfill

**RESPONSE TO WRITTEN COMMENTS RECEIVED ON DECEMBER 7, 2005
TENTATIVE ORDER NO. R9-2005-0183**

On December 7, 2005, the Regional Board received written comments from Mr. Hans Kernkamp General Manager of Riverside County Waste Management. The comments received from Mr. Kernkamp are specifically provided in Attachment 14 to this Item. The Regional Board staff responses to those comments are labeled as “**REGIONAL BOARD RESPONSES**” below and keyed to the numbered comments in the letter received from Riverside County and dated December 7, 2005.

REGIONAL BOARD RESPONSES:

1. **Discharger Comment numbers 1, 12, 16, and 18 (need for a deep well to monitoring fractured rock aquifer):** Please see Attachment 14 for the specific Discharger comments received December 7, 2005.

The Regional Board will change the reference to Riverside County Waste Management Department (RCWMD) as requested in this Comment 1.

The remainder of the comments referenced above concern the assertion made by RCWMD staff regarding the proximity of local domestic water supply wells to the Anza Landfill (in Finding No. 16 of the tentative Order R9-2005-0183) and the need to establish a deep monitoring well to assess the threat of pollution, presented by conditions at the unlined Anza Landfill, to the fractured rock aquifer which currently serves as a source of existing local domestic water supplies. The information about the location of the wells was taken from information provided in the 2001 JTD (including subsequent updates into 2002). A site map for consideration of this issue is included in Attachment 14 (Discharger comments received December 7, 2005) and labeled as “Anza Sanitary Landfill - Local Groundwater Well Locations.”

To the knowledge of the Regional Board, the Discharger has monitored, on a quarterly basis, groundwater monitoring wells located within the shallow alluvial aquifer at the facility. Historically, there have been varying concentrations of waste constituents (see **Regional Board Response No. 11** below) detected in the shallow aquifer at the site. There is also a fractured bedrock aquifer located beneath the shallow aquifer at the Anza Landfill (the “Unit”). The Regional Board does not agree with the apparent conclusion by the Discharger that is appropriate to confidently extrapolate data on groundwater flow direction and hydrologic gradient in the shallow alluvial aquifer to accurately characterize/evaluate the flow of groundwater within the deeper fractured rock aquifer that is locally used as a source of domestic water supply.

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The concerns of the Regional Board about the threat of pollution, from wastes in the Anza Landfill, to existing domestic water users is based in part upon the following considerations:

- There appear to be at least two “aquifers”, one in shallow alluvium and another in the deeper fractured rock, located beneath the Anza Landfill.
- Measurements of groundwater flow direction and gradient collected from the shallow alluvial aquifer do not necessarily reflect the flow-direction and hydrologic gradient of groundwater flow within the fractured rock aquifer used as a local source of domestic water supplies. As a result, the presumed groundwater flow direction provided by the Discharger may not be accurate for the deeper fractured rock aquifer.
- The Regional Board is unaware of existing field measurements (data) that may be used to assess the potential for vertical flow (communication) between the shallow and deep aquifer.
- Currently, there are no deep groundwater monitoring wells upon which to base a conclusion regarding the threat of pollution presented by waste constituents located within the shallow aquifer.

From information made available to the Regional Board, the 29 domestic water supply wells (referenced in Finding 16 and the Discharger comment number 1) appear to be screened and in a position to produce water from the fractured rock aquifer that is also located beneath the unlined Anza Landfill.

Historically, one or more releases of waste constituents have occurred from the Anza Landfill. At this time, the Regional Board is not in a position to assess whether or not the existing (or future) release(s) of waste constituents will affect beneficial uses of water produced from the fractured rock aquifer located beneath the Unit. The requirement to install and monitor at least one monitoring well (constructed so as to be collect representative groundwater samples from the fractured bedrock aquifer) is based upon our concerns described above. The Regional Board concludes that at least one additional deep groundwater well is necessary to assess potential impacts to the water quality within the deep fractured rock aquifer located beneath the facility.

2. **Discharger Comment number 2:** Please see Attachment 14 for Discharger comments received December 7, 2005. The current design of the engineered alternative cover (4 to 5 feet thickness) was properly evaluated and proposed in the JTD provided to the Regional Board.

A number of factors were considered in making this conclusion, including:

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- The relatively remote location of the Anza Landfill from the RCWMD headquarters/office.
- Relatively severe annual weather conditions (*i.e.*, including snow, runoff from snowmelt, rain storms, and surface water runoff) that may commonly occur at the Anza Landfill.
- The Anza Landfill is an unlined facility located over a fractured rock aquifer so effective control of infiltration and runoff are essential.
- Past violations cited by the Regional Board have included significant erosion of sediments from the existing interim landfill cover at the Anza Landfill. A thinner engineered landfill cover may result in exposure and erosion of wastes from the Unit.

Under the conditions described above, a thicker landfill cover may be a more effective waste containment function at the Anza Landfill. The Regional Board does not concur with the Discharger's suggested modification to reduce the thickness of the proposed design for the engineered alternative cover at the Anza Landfill.

3. **Discharger Comment number 3:** Please see Attachment 14 for Discharger comments received December 7, 2005. The Regional Board accepts the revised cost estimates for closure, post-closure maintenance, and corrective actions. The tentative Order has been revised to include the revised dollar values provided by the Discharger.
4. **Discharger Comment number 4:** Please see Attachment 14 for Discharger comments received December 7, 2005. Finding 37 and Provision 5 address the establishment of Financial Assurances for the Anza Landfill. Specifically, Provision 5 allows:

*“Within **one year** of the effective date of this Order, the Discharger shall establish and maintain adequate and acceptable assurances of financial responsibility for closure, post-closure monitoring and maintenance, or implementation of corrective action in response to a release of waste constituents from the waste management unit. The Discharger shall ensure that their selected financial assurance instrument meets the following minimum criteria:*

- a. *The financial assurance instrument makes funds directly available to the Regional Board upon a finding by the Regional Board that the Discharger has failed or refuses to implement closure, post-closure monitoring and maintenance, or conduct corrective actions in response to a release of waste constituents from the waste management unit.*

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- b. *The amount of the financial assurances are regularly updated to ensure that adequate funds can be made directly available to the Regional Board for implementation of closure, post-closure monitoring and maintenance, or corrective action.*

*When the Discharger notifies the Regional Board of a transfer of ownership (per **Provision D.8**), the notification shall include a proposed schedule for the succeeding owner to provide evidence of acceptable financial assurance responsibility to the Regional Board."*

The Regional Board does not agree with your assertion that a final determination has been made on this issue. The Discharger has one year to establish and maintain adequate and acceptable financial assurances to comply with tentative Order R9-2005-0183. The Regional Board staff recommends that the County counsel and Regional Board counsel be consulted to work out "acceptable" financial assurances during the coming year.

5. **Discharger Comment number 5:** The Regional Board noted this comment, (please see Attachment 14 for Discharger comments received December 7, 2005).
6. **Discharger Comment number 6:** Please see Attachment 14 for Discharger comments received December 7, 2005. The language for Provision No. 14 has been modified, as an errata to Order R9-2005-0183 **Attachment 16**, as follows:

This Order becomes effective on the date of adoption by the Regional Board. This Order supersedes Order Nos. 87-53 and addenda thereto, and Monitoring and Reporting Program No. 87-53. This Order also supercedes waste discharge requirements for the Anza Landfill contained therein and in Order No. 93-86.

7. **Discharger Comment number 7:** Please see Attachment 14 for Discharger comments received December 7, 2005. The Regional Board staff does not agree with the Discharger's assertion that "notification" to the Regional Board, at least 2 working days prior to any maintenance activities that are minor and/or routine in nature, is an "excessive" or "burdensome" reporting requirement. Such maintenance activities are commonly planned well in advance of execution of routine maintenance, not requiring submission of a work plan per Section E.1.b of this MRP, and notification of the Regional Board should be a part of your procedures for planning and executing maintenance activities at the Anza Landfill.
8. **Discharger Comments numbers 8, 9, 11, 15:** Please see Attachment 14 for Discharger comments received December 7, 2005. The Regional Board accepts all of those specific comments and those suggestions (references to the South Coast Air Quality Management District) have been incorporated in revised tentative Order

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(please see **Attachments 16 for revised WDR with errata and 17 for revised MRP with errata**).

9. **Discharger Comments number 13:** Please see Attachment 14 for Discharger comments received December 7, 2005. The Regional Board has modified the existing language in Monitoring and Reporting Program Section C.9 (see **Attachment 17 for revised MRP with errata**) to read as follows:

Ground water sampling shall also include an accurate determination of ~~field~~ parameters (pH, temperature, electrical conductivity and turbidity) for each monitoring point or background monitoring point [CCR Title 27 §20415(e)(13)].

10. **Discharger Comment number 14:** Please see Attachment 14 for Discharger comments received December 7, 2005. The actual requirement in the MRP (see **Attachment 17**) Section D.2.b states:

*“The Discharger shall annually sample, analyze and report analytical results from vapors, collected from the vadose zone vapor probes or active Landfill Gas (LFG) system, for all volatile organic constituents listed in Appendix II not historically detected in landfill gas, and shall perform verification re-sampling within six (6) months of the preliminary identification of any newly-detected constituents. Upon detection and verification of a new Appendix II constituent in soil vapor/landfill gas, the Discharger shall, **within 14 days**: 1) add the new constituent(s) to the landfill’s MPar list; 2) include the revised MPar list in the Operating Record; 3) provide the Regional Board with an updated MPar list, together with a list of the constituent(s) added during that reporting period. Once soil vapor or LFG monitoring has identified a new MPar, the Discharger shall note it prominently in the next monitoring report, together with each such new MPar’s concentration in the soil vapor/landfill gas.”*

The requirement of the MRP (see above) clearly states that vapor samples collected from either “...vapor probes or an active Landfill Gas (LFG) system...” are acceptable for compliance with the vapor analysis and reporting requirement. The Discharger should propose their preference for sampling soil gas probes in writing to the Regional Board.

The Discharger’s comment also expressed concerns about not being able to analyze for “semi-volatile constituents”, listed in the second part of their comment, in “air” samples. Further, the MRP requires analysis of “*volatile organic constituents listed in Appendix II ...*” rather than analysis of semi-volatile constituents in vapor samples. The Regional Board staff does not anticipate analysis of “semi-volatile” constituents to be an issue in the analysis of vapor samples collected from the Anza Landfill.

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11. **Discharger Comment number 17:** Please see Attachment 14 for Discharger comments received December 7, 2005. Based upon the existing data available to the Regional Board, a release of waste constituents has already occurred from the Anza Landfill, so the Unit currently requires that the Discharger implement a State Evaluation Monitoring Program (EMP under CCR Title 27, §20245) and a Federal Assessment Monitoring Program (AMP under CFR Title 40, §258.55).

The actual requirement in the MRP R9-2005-0183 (see **Attachment 17**) Section F.1 to F.4 state:

- “1. Except as provided in F.3 below, any time the laboratory analysis of a sample from a background monitoring point or detection monitoring point, sampled for VOCs shows either:*
- a. Two or more VOCs at or above their respective MDL, or*
 - b. One VOC at or above its respective PQL, then the Discharger shall:*
 - i. Notify the Regional Board by telephone and facsimile.*
 - ii. Follow up with written notification by certified mail within seven days.*
 - iii. Obtain two new independent VOC samples from that background monitoring point.*
 - iv. Send the samples for laboratory analysis of all detectable VOCs within 30 days.*
- 2. If either or both of the new samples validates the presence of VOC(s), using the above procedure, the Discharger shall:*
- a. Notify the Regional Board by telephone and facsimile.*
 - b. Follow up with written notification by certified mail within seven days.*
 - c. Within **180 days** of validation, submit a report that evaluates the possibility that the detected VOC(s) originated from the waste management unit and proposing appropriate changes to the monitoring program.*
- 3. If the Regional Board determines that the VOC(s) detected originated from a source other than the waste management unit, the Regional Board may choose to make appropriate changes to the monitoring program.*
- 4. In the absence of any other determination by the Regional Board within 90-days of the Discharger’s initial report under Section F.1 above, the Discharger shall assume that a release has been detected and shall immediately begin carrying out the applicable general requirements for Response to a Release (per Sections E.2 and E.5 of this Monitoring Program).”*

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The Regional Board has made the following correction to the text of the Section F.4 of the MRP (see **Attachment 17**):

“In the absence of any other determination by the Regional Board within 90-days of the Discharger’s initial report under Section F.1 above, the Discharger shall assume that a release has been detected and shall immediately begin carrying out the applicable general requirements for Response to a Release (per Sections E.~~21~~21 and to E.~~54~~54 of this Monitoring Program).”

Evidence from past groundwater monitoring reports indicates that groundwater conditions at the Anza Landfill meet the requirements for entering an “Evaluation Monitoring Program” (CCR Title 27), as given in section 20385(a)(2):

“Evaluation Monitoring (trigger #1) – The discharger shall institute an evaluation monitoring program (under §20245) whenever there is “measurably significant” (see §20164) evidence of a release from the Unit during a detection monitoring program [under §20420(g or I)]: ...”

CCR Title 27 (§20164) defines “measurably significant” evidence of a release as:

“... a change in the Monitoring Point data that, relative to the reference background value (or other approved reference value or distribution), is sufficient to indicate that a release has occurred pursuant to applicable data analysis methods (including its corresponding trigger).”

The criteria for determining that there have been a release(s) from the Anza Landfill (see above for Section F of MRP No. R9-2005-0183) are consistent with the requirements previously issued by the San Diego Regional Board [as General Order 93-86, (§13)] for compliance with both the State and Federal regulatory requirements for municipal solid waste landfills receiving wastes after 1993. The timeframes for initiating various steps within the Evaluation Monitoring Program are established by State (CCR Title 27, §20245: Evaluation monitoring program - EMP) and Federal (CFR Title 40, §258.55: Assessment monitoring program - AMP) requirements. The criteria established to determine if a release has occurred from the Unit, as established in General Order No. 93-86, are carried over into tentative Order R9-2005-0183 for identification of future releases of waste constituents from the Anza Landfill. It is the Discharger’s responsibility to determine if there has been a release from their Unit and initiate actions required for initiation of the EMP and AMP. The Discharger is not required to wait for a response from the Regional Board in order to initiate the EMP/AMP for the Unit.

The list of contaminants of concern (COCs list: see MRP R9-2005-0183 in **Attachment 17**) for the Anza Landfill includes a number of volatile organic constituents (VOCs) and other non-VOC constituents. Your previous response (see Discharger Comment 1 in

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Attachment 14: Discharger comments received December 7, 2005), acknowledges that there has been a release of volatile waste constituents from the Unit, and describes some of the observed and modeled impacts as follows:

- “.... the levels of VOCs detected at the site are typically between non-detect and/or below their respective MCL and/or DWAL levels...”
- “....the calculated contaminant plume extends only several hundred feet beyond the property boundary....”
- “Samples from downgradient ground water well A-5 continue to show VOCs either non-detect or near their respective MDLs.” Note: well A-5 is indicated as being located on the property boundary for the Anza Landfill (see **EOSR Attachment No. 17: MRP R9-2005-0183 – Site Map in Attachment No. 1 to MRP**).

The Regional Board concludes that a release of waste constituents has already occurred from the Unit, the release(s) has/have adversely impacted water quality beneath the Anza Landfill; waste constituents have possibly migrated beyond the facility boundary. Under these conditions, the Discharger must implement an EMP and AMP for the Unit to comply with current State and Federal regulatory requirements.

12. Discharger Comment number 10: Please see Attachment 14 for Discharger comments received December 7, 2005.

The electronic reporting regulations are specific about the types of “regulated facilities” and “Orders” included in the electronic reporting requirements:

1. Section 3890(a) of Title 23, CCR clearly indicates that the electronic reporting regulations are intended to provide electronic access to reports, including soil, vapor, and water data prepared for the purpose of subsurface investigation or remediation of: “... or (3) a discharge of waste to land subject to Division 2 of Title 27 or Division 3, Chapter 15, of Title 23 of the California Code of Regulations.
2. Section 3892 of Title 23, CCR states: “The following reports are subject to the requirements of this Chapter, when those reports are required for the purpose of subsurface investigation or remediation of ... (3) a discharge of waste to land subject to Division 2 of Title 27 or Division 3, Chapter 15, of Title 23 of the California Code of Regulations.
....
(b) Reports submitted pursuant to Division 2 of Title 27 or Division 3, Chapter 15 of Title 23 of the California Code of Regulations.

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- (c)
- (d)
- (e) Reports submitted pursuant to any other order of directive of the State Board, a regional board or a local agency.
- (f)”

As an inactive waste management unit subject to requirements of both the State and Federal (Title 40 CFR, Part 258) regulations for municipal solid waste landfills; the Anza Sanitary Landfill is currently regulated by applicable provisions and requirements of Division 2 of Title 27 CCR and waste discharge requirements (Order No. 93-86 and addenda thereto) issued by the San Diego Regional Board. The Regional Board staff conclude that the Anza Landfill clearly satisfies criteria for electronic reporting included in sections 3890(a), 3892(b), and 3892(e). For reporting data collected from the Anza Landfill, the County of Riverside must comply with the electronic reporting requirements of sections 3890 *et seq.* of Title 23, CCR.

The electronic reporting regulations do not prohibit the Regional Board from including a request for continuation of paper reporting as part of Waste Discharge Requirements (WDRs). In fact, section 3892 lists specific types of “Orders” that are affected by these requirements suggesting that the Regional Boards should amend/revise those affected Orders to ensure Dischargers comply with the applicable reporting requirements (e.g., electronic and/or alternative forms of reporting as indicated in section 3895(b)).

The continuation of requirements to submit complete paper copies of reports and data is due to a number of considerations and factors, including the following:

1. This requirement is intended to allow the Regional Board to maintain the continuity of our public record for the Anza Sanitary Landfill. All of our records are currently in paper-based format for public review and information.
2. The Regional Boards are not yet equipped with the minimum technological upgrades to support shifting our regulatory processes to a "paperless" electronic reporting system at this time. As a result, an interim requirement for Dischargers to continue providing complete paper copies of reports is necessary at this time.
3. The State Water Board is currently working on developing the technological upgrades for the Regional Boards to effectively manage and review electronic submittals of data for regulated facilities.

The Regional Board requests that the County of Riverside continue to submit complete copies of paper reports of information for the Anza Sanitary Landfill, until otherwise notified by the Regional Board. It is our understanding from the State Water Board

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management has encouraged the Regional Board Executive Officers to require the continuation of paper reporting for regulated facilities past July 1, 2005. As a result of the regulatory requirements and factors identified in this response, we respectfully decline your requested change the language of Monitoring Provisions 11 and 12 in tentative Order R9-2005-0183 at this time.

13. Remaining Discharger Comments and concerns:

After due consideration of your request, it has been decided that the scheduled item (**ITEM 5: Waste Discharge Requirements: County of Riverside, Anza Landfill, tentative Order No. R9-2005-0183**) will remain on the agenda for consideration by the Regional Board during the meeting on December 14, 2005.

Please consider the following information about making your specific remaining concerns and comments known to the Regional Board on December 14, 2005:

- At that meeting the Regional Board may decide to postpone or reschedule consideration of the item based upon their consideration of the tentative Order and/or public comments received on this item.
- You have the option of attending the December meeting to provide the Regional Board with your comments and concerns. If you would like to speak to the Board on this item, please be sure to fill out and submit a speaker slip when you arrive at the Board meeting.

The public meeting is scheduled to begin at 9:00 a.m. on Wednesday, December 14, 2005 at the following location:

**California Regional Water Quality Control Board
Regional Board Meeting Room
9174 Sky Park Court, Suite 100
San Diego, CA 92123**